



**BILLING CODE 3510-22-P**

**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**RIN 0648-XF831**

**Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Lighthouse Repair and Tour Operations at Northwest Seal Rock, California**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Notice; proposed incidental harassment authorization; request for comments.

**SUMMARY:** NMFS has received a request from the St. George Reef Lighthouse Preservation Society (Society) for authorization to take marine mammals incidental to conducting aircraft operations, lighthouse renovation, light maintenance activities, and tour operations on the St. George Reef Lighthouse Station on Northwest Seal Rock (NWSR) in the northeast Pacific Ocean. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an incidental harassment authorization (IHA) to incidentally take marine mammals during the specified activities. NMFS will consider public comments prior to making any final decision on the issuance of the requested MMPA authorizations and agency responses will be summarized in the final notice of our decision.

**DATES:** Comments and information must be received no later than **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** Comments should be addressed to Jolie Harrison, Chief, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service.

Physical comments should be sent to 1315 East-West Highway, Silver Spring, MD 20910 and electronic comments should be sent to *ITP.Fowler@noaa.gov*.

*Instructions:* NMFS is not responsible for comments sent by any other method, to any other address or individual, or received after the end of the comment period. Comments received electronically, including all attachments, must not exceed a 25-megabyte file size. Attachments to electronic comments will be accepted in Microsoft Word or Excel or Adobe PDF file formats only. All comments received are a part of the public record and will generally be posted online at <https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-research-and-other-activities> without change. All personal identifying information (*e.g.*, name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

**FOR FURTHER INFORMATION CONTACT:** Amy Fowler, Office of Protected Resources, NMFS, (301) 427-8401. Electronic copies of the application and supporting documents, as well as a list of the references cited in this document, may be obtained online at:

<https://www.fisheries.noaa.gov/national/marine-mammal-protection/incidental-take-authorizations-research-and-other-activities>. In case of problems accessing these documents, please call the contact listed above.

## **SUPPLEMENTARY INFORMATION:**

### **Background**

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce (as delegated to NMFS) to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity

(other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth.

NMFS has defined “negligible impact” in 50 CFR 216.103 as “...an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.”

The MMPA states that the term “take” means to harass, hunt, capture, kill or attempt to harass, hunt, capture, or kill any marine mammal.

Except with respect to certain activities not pertinent here, the MMPA defines “harassment” as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

### **National Environmental Policy Act**

To comply with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*) and NOAA Administrative Order (NAO) 216-6A, NMFS must review our proposed action (*i.e.*, the issuance of an incidental harassment authorization) with respect to potential

impacts on the human environment. This action is consistent with categories of activities identified in Categorical Exclusion B4 (incidental harassment authorizations with no anticipated serious injury or mortality) of the Companion Manual for NOAA Administrative Order 216-6A, which do not individually or cumulatively have the potential for significant impacts on the quality of the human environment and for which we have not identified any extraordinary circumstances that would preclude this categorical exclusion. Accordingly, NMFS has preliminarily determined that the issuance of the proposed IHA qualifies to be categorically excluded from further NEPA review.

We will review all comments submitted in response to this notice prior to concluding our NEPA process or making a final decision on the IHA request.

### **Summary of Request**

On October 18, 2017, NMFS received a request from the Society for an IHA to take marine mammals incidental to restoration, maintenance, and tour operations at St. George Reef Lighthouse (Station) located on Northwest Seal Rock (NWSR) offshore of Crescent City, California in the northeast Pacific Ocean. NMFS determined the application adequate and complete on January 17, 2018. The Society's request is for take of California sea lions (*Zalophus californianus*), Steller sea lions (*Eumetopias jubatus*), northern fur seals (*Callorhinus ursinus*) and Pacific harbor seals (*Phoca vitulina richardii*) by Level B harassment only. Neither the Society nor NMFS expects serious injury or mortality to result from this activity and, therefore, an IHA is appropriate.

NMFS has previously issued seven IHA's to the Society for similar work between 2010 and 2017 (75 FR 4774, January 29, 2010; 76 FR 10564, February 25, 2011; 77 FR 8811, February 15, 2012; 78 FR 71576, November 29, 2013; 79 FR 6179, February 3, 2014; 81 FR

9440, February 23, 2016; and 82 FR 11005, February 17, 2017). The Society complied with all the requirements (*e.g.*, mitigation, monitoring, and reporting) of the previous IHAs and information regarding their monitoring results may be found in the Estimated Take section.

## **Description of Proposed Activity**

### *Overview*

The Station, listed in the National Park Service's National Register of Historic Places, is located on NWSR offshore of Crescent City, California in the northeast Pacific Ocean. The Station, built in 1892, rises 45.7 meters (m) (150 feet (ft)) above sea level. The structure consists of hundreds of granite blocks topped with a cast iron lantern room and covers much of the surface of the islet. The purpose of the project is to restore the lighthouse, to conduct tours, and to conduct annual and emergency maintenance on the Station's optical light system.

The Society proposes to conduct aircraft operations, lighthouse renovation, and periodic maintenance on the Station's optical light system on a monthly basis. The proposed activity would occur on a monthly basis over one weekend, November through April. The Society currently has an IHA that is valid through February 18, 2018. This IHA would start on February 19, 2018, to avoid a lapse in authorization, and would be valid for one year. The following specific aspects of the proposed activities would likely result in the take of marine mammals: acoustic and visual stimuli from (1) helicopter landings/takeoffs; (2) noise generated during restoration activities (*e.g.*, painting, plastering, welding, and glazing); (3) maintenance activities (*e.g.*, bulb replacement and automation of the light system); and (4) human presence. Thus, NMFS anticipates that take, by Level B harassment only, of California sea lions, Pacific harbor seals, Steller sea lions of the eastern U.S. Stock, and northern fur seals could result from the specified activity.

### *Dates and Duration*

The Society proposes to conduct the activities (aircraft operations, lighthouse restoration and maintenance activities, and public tours) at a maximum frequency of one session per month. The proposed duration for each session would last no more than three days (*e.g.*, Friday, Saturday, and Sunday). The proposed IHA, if issued, would be effective from February 19, 2018 through February 18, 2019, with restrictions on the Society conducting activities from May 1, 2018 to October 31, 2018. The Society proposes to visit the Station for six three-day sessions for a total of 18 days over the course of the work window. NMFS refers the reader to the *Detailed Description of Specific Activity* section for more information on the scope of the proposed activities.

### *Specific Geographic Region*

The Station is located on a small, rocky islet (41°50'24" N, 124°22'06" W) approximately nine kilometers (km) (6.0 miles (mi)) in the northeast Pacific Ocean, offshore of Crescent City, California (41°46'48" N; 124°14'11" W). NWSR is approximately 91.4 meters (m) (300 feet (ft)) in diameter that peaks at 5.18 m (17 ft) above mean sea level.

### *Detailed Description of Specific Activity*

Aircraft Operations—Because NWSR has no safe landing area for boats, the proposed restoration, maintenance, and touring activities would require the Society to transport work personnel, equipment, and tourists from the California mainland to NWSR by a small helicopter. Helicopter landings take place on top of the engine room (caisson) which is approximately 15 m (48 ft) above the surface of the rocks on NWSR. The landing zone has been relocated closer to the edge of the caisson, increasing the distance of the rotor from the lighthouse tower by the required footage. The Society plans to charter a Robinson R66 helicopter, owned and operated

by Air Shasta Rotor and Wing, LLC. The Robinson R66, which seats three passengers and one pilot, is a compact-sized (1225 kilograms (kg), 2700 pounds (lbs)) helicopter with two-bladed main and tail rotors. Both sets of rotors are fitted with noise-attenuating blade tip caps that would decrease flyover noise.

The Society proposes to transport no more than 12 work crew members and equipment to NWSR for each session and estimates that each session would require no more than 30 helicopter landings/takeoffs per month (see below for number per day). During landing, the helicopter would land on the caisson to allow the work crew members to disembark and retrieve their equipment located in a basket attached to the underside of the helicopter. The helicopter would then return to the mainland to pick up additional personnel and equipment.

Proposed schedule: The Society would conduct a maximum of eight flights (four arrivals and four departures) for the first day. The first flight would depart from Crescent City Airport no earlier than 8:30 a.m. for a 6-minute flight to NWSR. The helicopter would land and takeoff immediately after offloading personnel and equipment every 20 minutes (min). The total duration of the first day's aerial operations could last for approximately four hours (hrs) and would end at approximately 12:30 p.m. Crew members would remain overnight at the Station and would not return to the mainland on the first day.

For the second day, the Society would conduct a maximum of four flights (two arrivals and two departures) to transport additional materials on and off the islet, if needed. The first flight would depart from Crescent City Airport at 9 a.m. for a 6-min flight to NWSR. The total duration of the second day's aerial operations could last up to three hrs. Second-day operations are only conducted if needed; flights on the second day do not normally occur.

For the final day of operations, on dates when no public tours are planned, the Society could conduct a maximum of eight helicopter flights (four arrivals and four departures) to transport the remaining crew members and equipment/material back to the Crescent City Airport. The total duration of the third day's helicopter operations in support of restoration could last up to two hrs.

Lighthouse Restoration Activities—Restoration and maintenance activities would involve the removal of peeling paint and plaster, restoration of interior plaster and paint, refurbishing structural and decorative metal, reworking original metal support beams throughout the lantern room and elsewhere, replacing glass as necessary, upgrading the present electrical system; and annual light beacon maintenance.

Public Tours—The Society began conducting public tours to the lighthouse by helicopter in 1998 in conjunction with restoration activities and proposes to conduct public tours at the Station during the last day of the proposed restoration session each month. Visitors touring the Station would be transported by helicopter during the Sunday work window period. The maximum number of expected tourists is 36 people per tour day. The total number of helicopter trips on a tour day (Sunday) is estimated at 34 (17 arrivals and 17 departures), all between the hours of 8:30 a.m. to 2 p.m. It is expected that each flight would land every 15-20 minutes. Thus, the total duration of the last day's aerial operations, including the restoration and maintenance activities described previously (two hour duration) would last for approximately five hours and 30 minutes. The scheduled duration of each visit is one hour per tour group. The last tour group would leave the island before 2:00 p.m. Return trips from the lighthouse to the mainland would include construction workers, equipment, and tourists.



Emergency Light Maintenance—If the beacon light fails, the Society proposes to send a crew of two to three people to the Station by helicopter to repair the beacon light. For each emergency repair event, the Society proposes to conduct a maximum of four flights (two arrivals and two departures) to transport equipment and supplies. The helicopter may remain on site or transit back to shore and make a second landing to pick up the repair personnel.

In the case of an emergency repair between May 1, 2018, and October 31, 2018, the Society would consult with the NMFS' West Coast Regional Office (WRO) biologists to best determine the timing of the trips to the lighthouse, on a case-by-case basis, based upon the existing environmental conditions and the abundance and distribution of any marine mammals present on NWSR. The regional biologists would have real-time knowledge regarding the animal use and abundance of the NWSR at the time of the repair request and would make a decision regarding when the Society could conduct trips to the lighthouse during the emergency repair time window that would have the least practicable adverse impact to marine mammals. The WRO biologists would also ensure that the Society's request for incidental take during emergency repairs would not exceed the number of incidental take authorized in the proposed IHA.

Proposed mitigation, monitoring, and reporting measures are described in detail later in this document (please see "Proposed Mitigation" and "Proposed Monitoring and Reporting").

### **Description of Marine Mammals in the Area of Specified Activities**

Sections 3 and 4 of the application summarize available information regarding status and trends, distribution and habitat preferences, and behavior and life history, of the potentially affected species. Additional information regarding population trends and threats may be found in NMFS's Stock Assessment Reports (SAR; <https://www.fisheries.noaa.gov/topic/population->

*assessments/marine-mammals*) and more general information about these species (*e.g.*, physical and behavioral descriptions) may be found on NMFS’s website (<https://www.fisheries.noaa.gov/find-species>).

Table 1 lists all species with expected potential for occurrence in the vicinity of NWSR and summarizes information related to the population or stock, including regulatory status under the MMPA and Endangered Species Act (ESA) and potential biological removal (PBR), where known. For taxonomy, we follow Committee on Taxonomy (2016). PBR is defined by the MMPA as the maximum number of animals, not including natural mortalities, that may be removed from a marine mammal stock while allowing that stock to reach or maintain its optimum sustainable population (as described in NMFS’s SARs). While no mortality is anticipated or authorized here, PBR and annual serious injury and mortality from anthropogenic sources are included here as gross indicators of the status of the species and other threats.

Marine mammal abundance estimates presented in this document represent the total number of individuals that make up a given stock or the total number estimated within a particular study or survey area. NMFS’s stock abundance estimates for most species represent the total estimate of individuals within the geographic area, if known, that comprises that stock. For some species, this geographic area may extend beyond U.S. waters. All managed stocks in this region are assessed in NMFS’s U.S. 2016 SARs (*e.g.*, Carretta *et al.*, 2017; Muto *et al.*, 2017). All values presented in Table 1 are the most recent available at the time of publication and are available in the 2016 SARs (Carretta *et al.*, 2017; Muto *et al.*, 2017).

**Table 1 – Marine Mammals in the Vicinity of Northwest Seal Rock**

Common name	Scientific name	Stock	ESA/MMPA status; Strategic (Y/N) <sup>1</sup>	Stock abundance (CV, N <sub>min</sub> , most recent abundance survey) <sup>2</sup>	PBR	Annual M/SI <sup>3</sup>
-------------	-----------------	-------	---	--	-----	--------------------------

Order Carnivora – Superfamily Pinnipedia						
Family Otariidae (eared seals and sea lions)						
California sea lion	<i>Zalophus californianus</i>	U.S.	-; N	296,750 (n/a; 153,337; 2011)	9,200	389
Steller sea lion	<i>Eumetopias jubatus</i>	Eastern U.S.	-; N	41,638 (n/a; 41,638; 2015)	2,498	108
Northern fur seal	<i>Callorhinus ursinus</i>	California Breeding	-; N	14,050 (n/a; 7,524; 2013)	451	1.8
Family Phocidae (earless seals)						
Pacific harbor seal	<i>Phoca vitulina richardii</i>	California	-; N	30,968 (n/a; 27,348; 2012)	1,641	43

1 - Endangered Species Act (ESA) status: Endangered (E), Threatened (T)/MMPA status: Depleted (D). A dash (-) indicates that the species is not listed under the ESA or designated as depleted under the MMPA. Under the MMPA, a strategic stock is one for which the level of direct human-caused mortality exceeds PBR or which is determined to be declining and likely to be listed under the ESA within the foreseeable future. Any species or stock listed under the ESA is automatically designated under the MMPA as depleted and as a strategic stock.

2- NMFS marine mammal stock assessment reports online at: [www.nmfs.noaa.gov/pr/sars/](http://www.nmfs.noaa.gov/pr/sars/). CV is coefficient of variation; N<sub>min</sub> is the minimum estimate of stock abundance. In some cases, CV is not applicable [explain if this is the case]

3 - These values, found in NMFS's SARs, represent annual levels of human-caused mortality (M) plus serious injury (SI) from all sources combined (e.g., commercial fisheries, ship strike). Annual M/SI often cannot be determined precisely and is in some cases presented as a minimum value or range. A CV associated with estimated mortality due to commercial fisheries is presented in some cases.

All species that could potentially occur in the proposed activity area are included in Table

1. As described below, all four species temporally and spatially co-occur with the activity to the degree that take is reasonably likely to occur, and we have proposed authorizing it.

#### *Eastern Distinct Population Segment of Steller Sea Lions*

Steller sea lions consist of two distinct population segments: the western and eastern distinct population segments (eDPS and wDPS, respectively) divided at 144° West longitude (Cape Suckling, Alaska). The western segment of Steller sea lions inhabit central and western Gulf of Alaska, Aleutian Islands, as well as coastal waters and breed in Asia (e.g., Japan and Russia). The eastern segment includes sea lions living in southeast Alaska, British Columbia, California, and Oregon. The eDPS includes animals born east of Cape Suckling, AK (144° W) (Muto *et al.*, 2017).

Steller sea lions range along the North Pacific Rim from northern Japan to California (Loughlin *et al.*, 1984), with centers of abundance and distribution in the Gulf of Alaska and Aleutian Islands, respectively. The species is not known to migrate, but individuals disperse widely outside of the breeding season (late May through early July), thus potentially intermixing with animals from other areas.

The eDPS of Steller sea lions breeds on rookeries located in southeast Alaska, British Columbia, Oregon, and California. Steller sea lions give birth in May through July and breeding commences a couple of weeks after birth. Pups are weaned during the winter and spring of the following year.

Despite the wide-ranging movements of juveniles and adult males in particular, exchange between rookeries by breeding adult females and males (other than between adjoining rookeries) appears low, although males have a higher tendency to disperse than females (Trujillo *et al.*, 2004; Hoffman *et al.*, 2006). A northward shift in the overall breeding distribution has occurred, with a contraction of the range in southern California and new rookeries established in southeastern Alaska (Pitcher *et al.*, 2007). Overall, counts of non-pups at trend sites in California and Oregon have been relatively stable or increasing slowly since the 1980s (Allen and Angliss 2012).

Steller sea lion numbers at NWSR ranged from 20 to 355 animals (CCR 2001). Counts of Steller sea lions during the spring (April - May), summer (June - August), and fall (September - October), averaged 68, 110, and 56, respectively (CCR 2001). A multi-year survey at NWSR between 2000 and 2004 showed Steller sea lion numbers ranging from 175 to 354 in July (M. Lowry, NMFS/SWFSC, unpubl. data). The Society presumes that winter use of NWSR by

Steller sea lion to be minimal, due to inundation of the natural portion of the island by large swells.

### *California Sea Lion*

The current maximum population growth rate for California sea lions is 12 percent (Carretta *et al.*, 2015). California sea lion breeding areas are on islands located in southern California, in western Baja California, Mexico, and the Gulf of California. During the breeding season, most California sea lions inhabit southern California and Mexico. Rookery sites in southern California are limited to the San Miguel Islands and the southerly Channel Islands of San Nicolas, Santa Barbara, and San Clemente (Carretta *et al.*, 2015). Males establish breeding territories during May through July on both land and in the water. Females come ashore in mid-May and June where they give birth to a single pup approximately four to five days after arrival and will nurse pups for about a week before going on their first feeding trip. Females will alternate feeding trips with nursing bouts until weaning between four and 10 months of age (Allen and Angliss 2010).

Adult and juvenile males will migrate as far north as British Columbia, Canada while females and pups remain in southern California waters in the non-breeding season. In warm water (El Niño) years, some females range as far north as Washington and Oregon, presumably following prey.

Crescent Coastal Research (CCR) conducted a three-year (1998-2000) survey of the wildlife species on NWSR for the Society. They reported that counts of California sea lions on NWSR varied greatly (from 6 to 541) during the observation period from April 1997 through July 2000. CCR reported that counts for California sea lions during the spring (April - May),

summer (June - August), and fall (September - October), averaged 60, 154, and 235, respectively (CCR 2001).

### *Northern Fur Seal*

Northern fur seals occur from southern California north to the Bering Sea and west to the Sea of Okhotsk and Honshu Island of Japan. NMFS recognizes two separate stocks of northern fur seals within U.S. waters: an Eastern Pacific stock distributed among sites in Alaska, British Columbia; and a California stock (including San Miguel Island and the Farallon Islands).

Northern fur seals breed in Alaska and migrate along the west coast during fall and winter. Due to their pelagic habitat, they are rarely seen from shore in the continental United States, but individuals occasionally come ashore on islands well offshore (*i.e.*, Farallon Islands and Channel Islands in California). During the breeding season, approximately 45 percent of the worldwide population inhabits the Pribilof Islands in the Southern Bering Sea, with the remaining animals spread throughout the North Pacific Ocean (Caretta *et al.*, 2015).

CCR observed one male northern fur seal on Northwest Seal Rock in October, 1998 (CCR 2001). It is possible that a few animals may use the island more often than indicated by the CCR surveys, if they were mistaken for other otariid species (*i.e.*, eared seals or fur seals and sea lions) (M. DeAngelis, NMFS, pers. comm., 2007).

### *Pacific Harbor Seal*

Harbor seals are widely distributed in the North Atlantic and North Pacific. Two subspecies exist in the Pacific: *Phoca vitulina stejnegeri* in the western North Pacific, near Japan, and *P. v. richardii* in the eastern North Pacific. The latter subspecies inhabits coastal and estuarine areas from Mexico to Alaska (Carretta *et al.*, 2014) and is the only stock present in the action area. Previous assessments of the status of harbor seals have recognized three stocks along

the west coast of the continental U.S.: 1) California, 2) Oregon and Washington outer coast waters, and 3) inland waters of Washington; however, the exact placement of the boundary was arbitrary.

In California, over 500 harbor seal haul out sites are widely distributed along the mainland and offshore islands, and include rocky shores, beaches and intertidal sandbars (Lowry *et al.*, 2005). Harbor seals mate at sea and females give birth during the spring and summer, although, the pupping season varies with latitude. Females nurse their pups for an average of 24 days and pups are ready to swim minutes after being born. Harbor seal pupping takes place at many locations and rookery size varies from a few pups to many hundreds of pups. The nearest harbor seal rookery relative to the proposed project site is at Castle Rock National Wildlife Refuge, located approximately located 965 m (0.6 mi) south of Point St. George, and 2.4 km (1.5 mi) north of the Crescent City Harbor in Del Norte County, California (USFWS 2007). CCR noted that harbor seal use of NWSR was minimal, with only one sighting of a group of six animals, during 20 observation surveys (CCR 2001). They hypothesized that harbor seals may avoid the islet because of its distance from shore, relatively steep topography, and full exposure to rough and frequently turbulent sea swells.

### **Potential Effects of Specified Activities on Marine Mammals and their Habitat**

This section includes a summary and discussion of the ways that components of the specified activity may impact marine mammals and their habitat. The *Estimated Take by Incidental Harassment* section later in this document includes a quantitative analysis of the number of individuals that are expected to be taken by this activity. The *Negligible Impact Analysis and Determination* section considers the content of this section, the *Estimated Take by Incidental Harassment* section, and the *Proposed Mitigation* section, to draw conclusions

regarding the likely impacts of these activities on the reproductive success or survivorship of individuals and how those impacts on individuals are likely to impact marine mammal species or stocks.

Acoustic and visual stimuli generated by: (1) helicopter landings/takeoffs; (2) restoration activities (*e.g.*, painting, plastering, welding, and glazing); (3) maintenance activities (*e.g.*, bulb replacement and automation of the light system); and (4) human presence may have the potential to cause behavioral disturbance.

Aircraft Presence and Noise—This section includes a brief explanation of the sound measurements frequently used in the discussions of acoustic effects in this notice. Sound pressure is the sound force per unit area, and is usually measured in micropascals ( $\mu\text{Pa}$ ), where 1 pascal (Pa) is the pressure resulting from a force of one newton exerted over an area of one square meter. Sound pressure level (SPL) is the ratio of a measured sound pressure and a reference level. The commonly used reference pressure is 1  $\mu\text{Pa}$  for under water, and the units for SPLs are dB re: 1  $\mu\text{Pa}$ . The commonly used reference pressure is 20  $\mu\text{Pa}$  for in air, and the units for SPLs are dB: 20  $\mu\text{Pa}$ .

$$\text{SPL (in decibels (dB))} = 20 \log (\text{pressure/reference pressure}).$$

SPL is an instantaneous measurement expressed as the peak, the peak-peak, or the root mean square (rms). Root mean square is the square root of the arithmetic average of the squared instantaneous pressure values. All references to SPL in this document refer to the rms unless otherwise noted. SPL does not take into account the duration of a sound.

Noise testing on the Robinson R66 Helicopter, as required for Federal Aviation Administration (FAA) approval, required an overflight at 150 m (492 ft) above ground level, 109 knots and a maximum gross weight of 1,225 kg (2,700 lbs). The noise level measured on the



ground at this distance and speed was 84.5 dB re: 20  $\mu$ Pa (A-weighted). FAA testing also measured the sound levels on the ground for a typical helicopter takeoff and approach as 87.8 dB re: 20  $\mu$ Pa (A-weighted) (Robinson 2017). Based on this information, we expect that the received sound levels at the landing area on the Station's caisson would be between 84.5 and 87.8 dB re: 20  $\mu$ Pa (A-weighted). These sound levels are below the NMFS behavioral threshold for airborne pinniped disturbance (90 dB for harbor seals and 100dB for all other pinnipeds) (NMFS 2016).

Any noise associated with restoration and maintenance activities is likely to be from light construction (*e.g.*, sanding, hammering, or use of hand drills). The Society proposes to confine all restoration activities to the existing structure, which would occur on the upper levels of the Station. Pinnipeds hauled out on NWSR do not have access to the upper levels of the Station.

Pinnipeds have the potential to be disturbed by airborne and underwater noise generated by the engine of the aircraft (Born *et al.*, 1999; Richardson *et al.*, 1995). Researchers have demonstrated temporary threshold shift (TTS) in certain captive odontocetes and pinnipeds exposed to strong sounds (reviewed in Southall *et al.*, 2007). In 2004, researchers measured auditory fatigue to airborne sound in harbor seals, California sea lions, and Northern elephant seals after exposure to non-pulse noise for 25 minutes (Kastak *et al.*, 2004). In the study, the harbor seal experienced approximately 6 dB of temporary threshold shift (TTS) at 99 dB re: 20  $\mu$ Pa. The authors identified onset of TTS in the California sea lion at 122 dB re: 20  $\mu$ Pa. The northern elephant seal experienced TTS-onset at 121 dB re: 20  $\mu$ Pa (Kastak *et al.*, 2004).

There is a dearth of information on acoustic effects of helicopter overflights on pinniped hearing and communication (Richardson, *et al.*, 1995) and to NMFS' knowledge, there has been no specific documentation of TTS, let alone permanent threshold shift (PTS), in free-ranging

pinnipeds exposed to helicopter operations during realistic field conditions (Baker *et al.*, 2012; Scheidat *et al.*, 2011).

In 2008, NMFS issued an IHA to the USFWS for the take of small numbers of Steller sea lions and Pacific harbor seals, incidental to rodent eradication activities on an islet offshore of Rat Island, AK conducted by helicopter. The 15-minute aerial treatment consisted of the helicopter slowly approaching the islet at an elevation of over 1,000 ft (304.8 m); gradually decreasing altitude in slow circles; and applying the rodenticide in a single pass and returning to Rat Island. The gradual and deliberate approach to the islet resulted in the sea lions present initially becoming aware of the helicopter and calmly moving into the water. Further, the USFWS reported that all responses fell well within the range of Level B harassment (*i.e.*, limited, short-term displacement resulting from aircraft noise due to helicopter overflights).

As a general statement from the available information, pinnipeds exposed to intense (approximately 110 to 120 dB re: 20  $\mu$ Pa) non-pulse sounds often leave haul out areas and seek refuge temporarily (minutes to a few hours) in the water (Southall *et al.*, 2007). Per Richardson *et al.* (1995), approaching aircraft generally flush animals into the water and noise from a helicopter is typically directed down in a “cone” underneath the aircraft.

It is likely that the initial helicopter approach to NWSR would cause a subset, or all of the marine mammals hauled out to depart the rock and flush into the water. The physical presence of aircraft could also lead to non-auditory effects on marine mammals involving visual or other cues. Airborne sound from a low-flying helicopter or airplane may be heard by marine mammals while at the surface or underwater. In general, helicopters tend to be noisier than fixed wing aircraft of similar size and underwater sounds from aircraft are strongest just below the surface and directly under the aircraft. Noise from aircraft would not be expected to cause direct physical

effects, but have the potential to affect behavior. The primary factor that may influence abrupt movements of animals is engine noise, specifically changes in engine noise. Responses by mammals could include hasty dives or turns, change in course, or flushing and stampeding from a haul out site. There are few well documented studies of the impacts of aircraft overflight over pinniped haul out sites or rookeries, and many of those that exist, are specific to military activities (Efroymson *et al.*, 2001).

Several factors complicate the analysis of long- and short-term effects for aircraft overflights. Information on behavioral effects of overflights by military aircraft (or component stressors) on most wildlife species is sparse. Moreover, models that relate behavioral changes to abundance or reproduction, and those that relate behavioral or hearing effects thresholds from one population to another are generally not available. In addition, the aggregation of sound frequencies, durations, and the view of the aircraft into a single exposure metric is not always the best predictor of effects and it may also be difficult to calculate. Overall, there has been no indication that single or occasional aircraft flying above pinnipeds in water cause long term displacement of these animals (Richardson *et al.*, 1995). The Lowest Observed Adverse Effects Levels (LOAEL) are rather variable for pinnipeds on land, ranging from just over 150 m (492 ft) to about 2,000 m (6,562 ft) (Efroymson *et al.*, 2001). A conservative (90th percentile) distance effects level is 1,150 m (3,773 ft). Most thresholds represent movement away from the overflight. Bowles and Stewart (1980) estimated an LOAEL of 305 m (1,000 ft) for helicopters (low and landing) in California sea lions and harbor seals observed on San Miguel Island, CA; animals responded to some degree by moving within the haul out and entering into the water, stampeding into the water, or clearing the haul out completely. Both species always responded

with the raising of their heads. California sea lions appeared to react more to the visual cue of the helicopter than the noise.

If pinnipeds are present on NWSR, it is likely that a helicopter landing at the Station would cause some number of the pinnipeds on NWSR to flush; however, when present, they appear to show rapid habituation to helicopter landing and departure (CCR, 2001; Guy Towers, SGRLPS, pers. com.). According to the CCR Report (2001), while up to 40 percent of the California and Steller sea lions present on NWSR have been observed to enter the water on the first of a series of helicopter landings, as few as zero percent have flushed on subsequent landings on the same date. In fact, the Society reported that during the November 2011 work session, Steller sea lions and California sea lions exhibited minimal ingress and egress from NWSR during helicopter approaches and departures (SGRLPS, 2011).

Human Presence—The appearance of Society personnel may have the potential to cause Level B harassment of marine mammals hauled out on the small island in the proposed action area. Disturbance includes a variety of effects, including subtle to conspicuous changes in behavior, movement, and displacement. Disturbance may result in reactions ranging from an animal simply becoming alert to the presence of the Society's restoration personnel (*e.g.*, turning the head, assuming a more upright posture) to flushing from the haul out site into the water. NMFS does not consider the lesser reactions to constitute behavioral harassment, or Level B harassment takes, but rather assumes that pinnipeds that move greater than two body lengths to longer retreats over the beach, or if already moving, a change of direction of greater than 90 degrees in response to the presence of surveyors, or pinnipeds that flush into the water, are behaviorally harassed, and thus subject to Level B taking. NMFS uses a 3-point scale (Table 2) to determine which disturbance reactions constitute take under the MMPA. Levels two and three

(movement and flush) are considered take, whereas level one (alert) is not. Animals that respond to the presence of the Society's restoration personnel by becoming alert, but do not move or change the nature of locomotion as described, are not considered to have been subject to behavioral harassment.

**Table 2. Disturbance scale of pinniped responses to in-air sources to determine take**

Level	Type of response	Definition
1	Alert	Seal head orientation or brief movement in response to disturbance, which may include turning head towards the disturbance, craning head and neck while holding the body rigid in a u-shaped position, changing from a lying to a sitting position, or brief movement of less than twice the animal's body length.
2*	Movement	Movements in response to the source of disturbance, ranging from short withdrawals at least twice the animal's body length to longer retreats over the beach, or if already moving a change of direction of greater than 90 degrees.
3*	Flush	All retreats (flushes) to the water.

\* Only Levels 2 and 3 are considered take, whereas Level 1 is not.

Reactions to human presence, if any, depend on species type, state of maturity, experience, current activity, reproductive state, time of day, and many other factors (Richardson *et al.*, 1995; Southall *et al.*, 2007; Weilgart 2007). These behavioral reactions from marine mammals are often shown as: changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior; avoidance of areas; and/or flight responses (*e.g.*, pinnipeds flushing into the water from haul outs or rookeries). If a marine mammal does react briefly to human presence by changing its behavior or moving a small distance, the impacts of the change are unlikely to be significant to the individual, let alone the stock or population. However, if visual stimuli from human presence displaces marine mammals from an important feeding or

breeding area for a prolonged period, impacts on individuals and populations could be significant (e.g., Lusseau and Bejder 2007; Weilgart, 2007). Nevertheless, this is not likely to occur during the proposed activities since rapid habituation of the site is expected to occur after a potential pinniped flush.

Disturbances resulting from human activity can impact short- and long-term pinniped haul out behavior (Renouf *et al.*, 1981; Schneider and Payne, 1983; Terhune and Almon, 1983; Allen *et al.*, 1984; Stewart, 1984; Suryan and Harvey, 1999; and Kucey and Trites, 2006). Numerous studies have shown that human activity can flush harbor seals off haul out sites (Allen *et al.*, 1984; Calambokidis *et al.*, 1991; and Suryan and Harvey 1999) or lead Hawaiian monk seals (*Neomonachus schauinslandi*) to avoid beaches (Kenyon 1972). In one case, human disturbance appeared to cause Steller sea lions to desert a breeding area at Northeast Point on St. Paul Island, Alaska (Kenyon 1962).

In cases where vessels actively approached marine mammals (e.g., whale watching or dolphin watching boats), scientists have documented that animals exhibit altered behavior such as increased swimming speed, erratic movement, and active avoidance behavior (Acevedo, 1991; Trites and Bain, 2000; Williams *et al.*, 2002; Constantine *et al.*, 2003), reduced blow interval (Richter *et al.*, 2003), disruption of normal social behaviors (Lusseau 2003; 2006), and the shift of behavioral activities which may increase energetic costs (Constantine *et al.*, 2003; 2004). In 1997, Henry and Hammil (2001) conducted a study to measure the impacts of small boats (i.e., kayaks, canoes, motorboats and sailboats) on harbor seal haul out behavior in Metis Bay, Quebec, Canada. During that study, the authors noted that the most frequent disturbances (n=73) were caused by lower speed, lingering kayaks, and canoes (33.3 percent) as opposed to motorboats (27.8 percent) conducting high speed passes. The seal's flight reactions could be

linked to a surprise factor by kayaks and canoes which approach slowly, quietly, and low on the water making them look like predators. However, the authors note that once the animals were disturbed, there did not appear to be any significant lingering effect on the recovery of numbers to their pre-disturbance levels. In conclusion, the study showed that boat traffic at current levels has only a temporary effect on the haul out behavior of harbor seals in the Metis Bay area.

In 2004, Acevedo-Gutierrez and Johnson (2007) evaluated the efficacy of buffer zones for watercraft around harbor seal haul out sites on Yellow Island, Washington. The authors estimated the minimum distance between the vessels and the haul out sites; categorized the vessel types; and evaluated seal responses to the disturbances. During the course of the seven-weekend study, the authors recorded 14 human-related disturbances which were associated with stopped powerboats and kayaks. During these events, hauled out seals became noticeably active and moved into the water. The flushing occurred when stopped kayaks and powerboats were at distances as far as 453 and 1,217 ft (138 and 371 m) respectively. The authors note that the seals were unaffected by passing powerboats, even those approaching as close as 128 ft (39 m), possibly indicating that the animals had become tolerant of the brief presence of the vessels and ignored them. The authors reported that on average, the seals quickly recovered from the disturbances and returned to the haul out site in less than or equal to 60 minutes. Seal numbers did not return to pre-disturbance levels within 180 minutes of the disturbance less than one quarter of the time observed. The study concluded that the return of seal numbers to pre-disturbance levels and the relatively regular seasonal cycle in abundance throughout the area counter the idea that disturbances from powerboats may result in site abandonment (Johnson and Acevedo-Gutierrez, 2007). As a general statement from the available information, pinnipeds exposed to intense (approximately 110 to 120 decibels re: 20  $\mu$ Pa) non-pulsed sounds often leave

haul out areas and seek refuge temporarily (minutes to a few hours) in the water (Southall *et al.*, 2007).

Stampede—There are other ways in which disturbance, as described previously, could result in more than Level B harassment of marine mammals. They are most likely to be consequences of stampeding, a potentially dangerous occurrence in which large numbers of animals succumb to mass panic and rush away from a stimulus. These situations are: (1) falling when entering the water at high-relief locations; (2) extended separation of mothers and pups; and (3) crushing of pups by large males during a stampede. However, NMFS does not expect any of these scenarios to occur at NWSR as the proposed action occurs outside of the pupping/breeding season and no mother/pup pairs are expected to be at the Station. There is the risk of injury if animals stampede towards shorelines with precipitous relief (*e.g.*, cliffs). However, there are no cliffs on NWSR. The haul out sites consist of ridges with unimpeded and non-obstructive access to the water. If disturbed, the small number of hauled-out adult animals may move toward the water without risk of encountering barriers or hazards that would otherwise prevent them from leaving the area. Moreover, the proposed area would not be crowded with large numbers of Steller sea lions, further eliminating the possibility of potentially injurious mass movements of animals attempting to vacate the haul out. Thus, in this case, NMFS considers the risk of injury, serious injury, or death to hauled-out animals as very low.

*Anticipated Effects on Marine Mammal Habitat*

The only habitat modification associated with the proposed activity is the restoration of a light station. However, all restoration would occur on the upper levels of Northwest Seal Rock, which are not used by marine mammals. Thus, NMFS does not expect that the proposed activity



would have any effects on marine mammal habitat and NMFS expects that there will be no long- or short-term physical impacts to pinniped habitat on NWSR.

The Society would remove all waste, discarded materials and equipment from the island after each visit. The proposed activities will not result in any permanent impact on habitats used by marine mammals, including prey species and foraging habitat. The main impact associated with the proposed activity will be temporarily elevated noise levels and the associated direct effects on marine mammals (*i.e.*, the potential for temporary abandonment of the site), previously discussed in this notice.

NMFS does not anticipate that the proposed restoration activities would result in any permanent effects on the habitats used by the marine mammals in the proposed area, including the food sources they use (*i.e.*, fish and invertebrates). Based on the preceding discussion, NMFS does not anticipate that the proposed activity would have any habitat-related effects that could cause significant or long-term consequences for individual marine mammals or their populations.

### **Estimated Take**

This section provides an estimate of the number of incidental takes proposed for authorization through this IHA, which will inform both NMFS' consideration of "small numbers" and the negligible impact determination.

Harassment is the only type of take expected to result from these activities. Except with respect to certain activities not pertinent here, section 3(18) of the MMPA defines "harassment" as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild (Level A harassment); or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of

behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B harassment).

Authorized takes would be by Level B harassment only, in the form of disruption of behavioral patterns for individual marine mammals resulting from exposure to aircraft operations and lighthouse maintenance activities. Based on the nature of the activity, Level A harassment is neither anticipated nor proposed to be authorized.

As discussed earlier, NMFS assumes that pinnipeds that move greater than two body lengths to longer retreats over the beach, or if already moving, a change of direction of greater than 90 degrees in response to the presence of surveyors, or pinnipeds that flush into the water, are behaviorally harassed, and thus subject to Level B taking (Table 2).

#### *Marine Mammal Occurrence*

In this section we provide the information about the presence, density, or group dynamics of marine mammals that will inform the take calculations.

For the 2010 season, the Society reported that no Steller sea lions were present in the vicinity of NWSR during restoration activities (SGRLPS 2010). Based on the monitoring report for the 2011 season, the maximum numbers of Steller sea lions present during the April and November 2011, work sessions were 2 and 150 animals, respectively (SGRLPS 2012). During the 2012 season, the Society did not observe any Steller sea lions present on NWSR during restoration activities. The Society did not conduct any operations for the 2013-2014, 2014-2015, and 2015-2016 seasons. The Society reported no Steller sea lions observed in the 2016-2017 and 2017-2018 work seasons (T. McNamara, pers. comm., 2018).

Based on the monitoring report for the 2011 season, the maximum numbers of California sea lions present during the April and November, 2011 work sessions were 2 and 160 animals,

respectively (SGRLPS 2012). There were no California sea lions present during the March, 2012 work session (SGRLPS 2012). The Society reported 16 California sea lions observed in March 2017 and no California sea lions present in April 2017. 16 California sea lions were observed in November 2017. (Terry McNamara, pers. comm., 2018).

For the 2010, 2011, and 2012 work seasons, the Society did not observe any Northern fur seals present on NWSR during restoration activities (SGRLPS 2010; 2011; 2012). No Northern fur seals were observed during the 2016-2017 and 2017-2018 work seasons (Terry McNamara, pers. comm., 2018).

For the 2010 and 2011 seasons, the Society did not observe any Pacific harbor seals present on NWSR during restoration activities (SGRLPS 2010; 2011). During the 2012 season, the Society reported sighting a total of two harbor seals present on NWSR (SGRLPS 2012). No harbor seals were observed during the 2016-2017 and 2017-2018 work seasons (Terry McNamara, pers. comm., 2018).

#### *Take Calculation and Estimation*

Here we describe how the information provided above is brought together to produce a quantitative take estimate.

Based on the Society's previous monitoring reports, NMFS estimates that approximately 2,880 California sea lions (calculated by multiplying the maximum single-day count of California sea lions present on NWSR (160) by 18 days of the restoration, maintenance, and touring activities), 2,790 Steller sea lions (calculated by multiplying the maximum single-day count of Steller sea lions that could be present (155) by 18 days of the restoration, maintenance, and touring activities), 36 Pacific harbor seals (calculated by multiplying the maximum single-day count of harbor seals present on NWSR (2) by 18 days), and 18 Northern fur seals

(calculated by multiplying the maximum number of northern fur seals present on NWSR (1) by 18 days) could be potentially affected by Level B behavioral harassment over the course of the IHA. NMFS bases these estimates of the numbers of marine mammals that might be affected on consideration of the number of marine mammals that could be disturbed appreciably by approximately 75 hours of aircraft operations over the course of the activity. These incidental harassment take numbers represent less than one percent of the affected stocks for California sea lions, Pacific harbor seals, and Northern fur seals, and less than seven percent of the stock of Steller sea lions (Table 3). However, actual take may be slightly less if animals decide to haul out at a different location for the day or if animals are foraging at the time of the survey activities.

**Table 3. The percentage of stock affected by the number of takes per species**

<b>Species</b>	<b>Maximum Number per Day</b>	<b>Days of Proposed Activity</b>	<b>Take Number</b>	<b>Stock Abundance</b>	<b>Percent of Stock</b>
California sea lion ( <i>Zalophus californianus</i> )	160	18	2,880	296,750	0.97
Steller sea lion ( <i>Eumetopias jubatus</i> )	155	18	2,790	41,638	6.7
Pacific harbor seal ( <i>Phoca vitulina</i> )	2	18	36	30,968	0.35
Northern fur seal ( <i>Callorhinus ursinus</i> )	1	18	18	14,050	.12

### **Proposed Mitigation**

In order to issue an IHA under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, “and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such

species or stock for taking” for certain subsistence uses (latter not applicable for this action). NMFS regulations require applicants for incidental take authorizations to include information about the availability and feasibility (economic and technological) of equipment, methods, and manner of conducting such activity or other means of effecting the least practicable adverse impact upon the affected species or stocks and their habitat (50 CFR 216.104(a)(11)).

In evaluating how mitigation may or may not be appropriate to ensure the least practicable adverse impact on species or stocks and their habitat, as well as subsistence uses where applicable, we carefully consider two primary factors:

1) The manner in which, and the degree to which, the successful implementation of the measure(s) is expected to reduce impacts to marine mammals, marine mammal species or stocks, and their habitat. This considers the nature of the potential adverse impact being mitigated (likelihood, scope, range). It further considers the likelihood that the measure will be effective if implemented (probability of accomplishing the mitigating result if implemented as planned) the likelihood of effective implementation (probability implemented as planned); and

2) The practicability of the measures for applicant implementation, which may consider such things as cost, impact on operations, and, in the case of a military readiness activity, personnel safety, practicality of implementation, and impact on the effectiveness of the military readiness activity.

#### *Mitigation for Marine Mammals and their Habitat*

Time and Frequency—The Society would conduct restoration and touring activities at a maximum of once per month over the course of the year, with the exception of between May 1, 2018 through October 31, 2018 (barring potential emergency light repairs during this time). Each restoration session would last no more than three days. Maintenance of the light beacon would

occur only in conjunction with restoration activities (except if an emergency light repair is needed from May 1, 2018 through October 31, 2018).

Helicopter Approach and Timing Techniques—The Society would ensure that its helicopter approach patterns to the Station and timing techniques would be conducted at times when marine mammals are less likely to be disturbed. To the extent possible, the helicopter should approach NWSR when the tide is too high for the marine mammals to haul out on NWSR. Additionally, since the most severe impacts (stampede) precede rapid and direct helicopter approaches, the Society's initial approach to the station must be offshore from the island at a relatively high altitude (*e.g.*, 800 – 1,000 ft, or 244 – 305 m). Before the final approach, the helicopter shall circle lower and approach from area with the lowest pinniped density. If for any safety reasons (*e.g.*, wind condition) the Society cannot conduct these types of helicopter approach and timing techniques, they must postpone the restoration and maintenance activities for that day.

Avoidance of Visual and Acoustic Contact with People on Island—The Society would instruct its members and restoration crews to avoid making unnecessary noise and not expose themselves visually to pinnipeds around the base of the station. Although CCR reported no impacts from these activities in the 2001 study, it is relatively simple for the Society to avoid this potential impact. The door to the lower platform shall remain closed and barricaded to all tourists and other personnel since the lower platform is used at times by pinnipeds.

Based on our evaluation of the applicant's proposed measures, NMFS has preliminarily determined that the proposed mitigation measures provide the means effecting the least practicable impact on the affected species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

## Proposed Monitoring and Reporting

In order to issue an IHA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth, “requirements pertaining to the monitoring and reporting of such taking.” The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for authorizations must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area. Effective reporting is critical both to compliance as well as ensuring that the most value is obtained from the required monitoring.

Monitoring and reporting requirements prescribed by NMFS should contribute to improved understanding of one or more of the following:

- Occurrence of marine mammal species or stocks in the area in which take is anticipated (*e.g.*, presence, abundance, distribution, density).
- Nature, scope, or context of likely marine mammal exposure to potential stressors/impacts (individual or cumulative, acute or chronic), through better understanding of: (1) action or environment (*e.g.*, source characterization, propagation, ambient noise); (2) affected species (*e.g.*, life history, dive patterns); (3) co-occurrence of marine mammal species with the action; or (4) biological or behavioral context of exposure (*e.g.*, age, calving or feeding areas).
- Individual marine mammal responses (behavioral or physiological) to acoustic stressors (acute, chronic, or cumulative), other stressors, or cumulative impacts from multiple stressors.
- How anticipated responses to stressors impact either: (1) long-term fitness and survival of individual marine mammals; or (2) populations, species, or stocks.

- Effects on marine mammal habitat (*e.g.*, marine mammal prey species, acoustic habitat, or other important physical components of marine mammal habitat).
- Mitigation and monitoring effectiveness.

As part of its IHA application, the Society proposes to sponsor marine mammal monitoring, in order to implement the mitigation measures that require real-time monitoring, and to satisfy the monitoring requirements of the proposed IHA. These requirements include:

- A NMFS approved, experienced biologist that will be present on the first flight of each day of the activity. This observer will be able to identify all species of pinnipeds expected to use the island, and qualified to determine age and sex classes when viewing conditions allow. The observer would record data including species counts, numbers of observed disturbances, and descriptions of the disturbance behaviors during the activities, including location, date, and time of the event. In addition, the Society would record observations regarding the number and species of any marine mammals either observed in the water or hauled out.
- Aerial photographic surveys to provide an accurate means of documenting species composition, age and sex class of pinnipeds using the project site during human activity periods. The Society should complete aerial photo coverage from the same helicopter used to transport the Society's personnel to the island during restoration trips. The Society would take photographs of all marine mammals hauled out on the island from an altitude greater than 300 m (984 ft) by a skilled photographer, on the first flight of each day of activities. These photographs will be forwarded to a biologist capable of discerning marine mammal species. Data shall be provided to us in the form of a report with a data table, any other significant observations related to marine mammals, and a report of restoration activities (see *Proposed Reporting*). The original



photographs can be made available to us or other marine mammal experts for inspection and further analysis.

As detailed above, the proposed monitoring requirements in relation to the Society's proposed activities would include species counts, numbers of observed disturbances, and descriptions of the disturbance behaviors during the restoration activities, including location, date, and time of the event. In addition, the Society would record observations regarding the number and species of any marine mammals either observed in the water or hauled out.

By completing the proposed requirements mentioned above, the Society can add to the knowledge of pinnipeds in the proposed action area by noting observations of: (1) unusual behaviors, numbers, or distributions of pinnipeds, enabling appropriate personnel to conduct future follow-up research; (2) tag-bearing carcasses of pinnipeds, allowing transmittal of the information to appropriate agencies and personnel; and (3) rare or unusual species of marine mammals for agency follow-up.

If at any time injury, serious injury, or mortality of the species for which take is authorized should occur, or if take of any other kind of marine mammal occurs, and such action may be a result of the Society's activities, the Society would suspend restoration and tour activities and contact NMFS immediately. NMFS will then determine how best to proceed to ensure another injury or death does not occur and to guarantee the applicant remains in compliance with the MMPA.

#### *Proposed Reporting*

The Society would submit a draft report to NMFS' Office of Protected Resources no later than 90 days after the conclusion of restoration activities in April. The report will include a summary of the information gathered pursuant to the monitoring requirements set forth in the

proposed IHA. The Society will submit a final report to NMFS within 30 days after receiving comments from NMFS on the draft report. If the Society receives no comments from NMFS on the report, NMFS will consider the draft report to be the final report.

The report will describe the operations conducted and sightings of marine mammals near the proposed project. The report will provide full documentation of methods, results, and interpretation pertaining to all monitoring. The report will provide:

1. A summary and table of the dates, times, and weather during all activities.
2. Species, number, location, and behavior of any marine mammals observed throughout all monitoring activities.
3. An estimate of the number (by species) of marine mammals exposed to human presence associated with the Society's activities.
4. A description of the implementation and effectiveness of the monitoring and mitigation measures of the IHA and full documentation of methods, results, and interpretation pertaining to all monitoring.

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the authorization, such as an injury (Level A harassment), serious injury, or mortality (*e.g.*, stampede), society personnel shall immediately cease the specified activities and immediately report the incident to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, and the Assistant West Coast Regional Stranding Coordinator. The report must include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Description and location of the incident (including water depth, if applicable);

- Environmental conditions (*e.g.*, wind speed and direction, Beaufort sea state, cloud cover, and visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available)

The Society shall not resume its activities until NMFS is able to review the circumstances of the prohibited take. We will work with the Society to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The Society may not resume their activities until notified by us via letter, email, or telephone.

In the event that the Society discovers an injured or dead marine mammal, and the marine mammal observer determines that the cause of the injury or death is unknown and the death is relatively recent (*i.e.*, in less than a moderate state of decomposition as we describe in the next paragraph), the Society will immediately report the incident to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, and the Assistant West Coast Regional Stranding Coordinator. The report must include the same information identified in the paragraph above this section. Activities may continue while NMFS reviews the circumstances of the incident. NMFS would work with the Society to determine whether modifications in the activities are appropriate.

In the event that the Society discovers an injured or dead marine mammal, and the lead visual observer determines that the injury or death is not associated with or related to the authorized activities (*e.g.*, previously wounded animal, carcass with moderate to advanced

decomposition, or scavenger damage), the Society will report the incident to the Chief, Permits and Conservation Division, Office of Protected Resources, NMFS, and the Assistant West Coast Regional Stranding Coordinator within 24 hours of the discovery. Society personnel will provide photographs or video footage (if available) or other documentation of the stranded animal sighting to us. The Society can continue their survey activities while NMFS reviews the circumstances of the incident.

### **Negligible Impact Analysis and Determination**

NMFS has defined negligible impact as “an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival” (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (*i.e.*, population-level effects). An estimate of the number of takes alone is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be “taken” through harassment, NMFS considers other factors, such as the likely nature of any responses (*e.g.*, intensity, duration), the context of any responses (*e.g.*, critical reproductive time or location, migration), as well as effects on habitat, and the likely effectiveness of the mitigation. We also assess the number, intensity, and context of estimated takes by evaluating this information relative to population status. Consistent with the 1989 preamble for NMFS’s implementing regulations (54 FR 40338; September 29, 1989), the impacts from other past and ongoing anthropogenic activities are incorporated into this analysis via their impacts on the environmental baseline (*e.g.*, as reflected in the regulatory status of the species, population size and growth rate where known, ongoing sources of human-caused mortality, or ambient noise levels).

Although the Society's survey activities may disturb a small number of marine mammals hauled out on NWSR, NMFS expects those impacts to occur to a small, localized group of animals for a limited duration (*e.g.*, six hours in one day). Marine mammals would likely become alert or, at most, flush into the water in reaction to the presence of the Society's personnel during the proposed activities. Disturbance will be limited to a short duration, allowing marine mammals to reoccupy NWSR within a short amount of time. Thus, the proposed action is unlikely to result in long-term impacts such as permanent abandonment of the area because of the availability of alternate areas for pinnipeds to avoid the resultant acoustic and visual disturbances from the restoration activities and helicopter operations. Results from previous monitoring reports also show that the pinnipeds returned to NWSR and did not permanently abandon haul out sites after the Society conducted their activities.

The Society's activities would occur during the least sensitive time (*e.g.*, November through April, outside of the pupping season) for hauled out pinnipeds on NWSR. Thus, pups or breeding adults would not be present during the proposed activity days.

Moreover, the Society's mitigation measures regarding helicopter approaches and restoration site ingress and egress would minimize the potential for stampedes and large-scale movements. Thus, the potential for large-scale movements and stampede leading to injury, serious, injury, or mortality is low.

Any noise attributed to the Society's proposed helicopter operations on NWSR would be short-term (approximately six minutes per trip). We would expect the ambient noise levels to return to a baseline state when helicopter operations have ceased for the day. As the helicopter lands and takes off from the station, NMFS presumes that the received sound levels would be between 84.5-87.8 Db RE: 20  $\mu$ Pa (A-weighted) at the landing pad. However, we do not expect

that the increased received levels of sound from the helicopter would cause TTS or PTS because the sound levels are below the thresholds for airborne pinniped disturbance at the landing pad which is 15 m (48 ft) above the rocks. Additionally, the pinnipeds would likely flush before the helicopter approached NWSR, further increasing the distance between the pinnipeds and the received sound levels on NWSR during the proposed action.

If pinnipeds are present on NWSR, Level B behavioral harassment of pinnipeds may occur during helicopter landing and takeoff from NWSR due to the pinnipeds temporarily moving from the rocks and lower structure of the Station into the sea due to the noise and appearance of a helicopter during approaches and departures. It is expected that all or a portion of the marine mammals hauled out on NWSR will depart the rock and slowly move into the water upon initial helicopter approaches. The movement to the water would be gradual due to the required controlled helicopter approaches (see *Proposed Mitigation* for more details), the small size of the aircraft, the use of noise-attenuating blade tip caps on the rotors, and behavioral habituation on the part of animals as helicopter trips continue throughout the day. During the sessions of helicopter activity, if present on NWSR, some animals may be temporarily displaced from the island and either raft in the water or relocate to other haul outs.

Sea lions have shown habituation to helicopter flights within a day at the project site and most animals are expected to return soon after helicopter activities cease for that day. By clustering helicopter arrivals/departures within a short time period, we expect animals present to show less response to subsequent landings. NMFS anticipates no impact on the population size or breeding stock of Steller sea lions, California sea lions, Pacific harbor seals, or Northern fur seals.

In summary and as described above, the following factors primarily support our preliminary determination that the impacts resulting from this activity are not expected to adversely affect the species or stock through effects on annual rates of recruitment or survival:

- The impacts to animals present would be of limited duration (*i.e.*, at maximum three days a month);
- The impacts would be of limited intensity (*i.e.*, temporary flushing at most); and
- No injury or mortality is anticipated or authorized.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from the proposed activity will have a negligible impact on all affected marine mammal species or stocks.

### **Small Numbers**

As noted above, only small numbers of incidental take may be authorized under section 101(a)(5)(D) of the MMPA for specified activities other than military readiness activities. The MMPA does not define small numbers and so, in practice, where estimated numbers are available, NMFS compares the number of individuals taken to the most appropriate estimation of abundance of the relevant species or stock in our determination of whether an authorization is limited to small numbers of marine mammals. Additionally, other qualitative factors may be considered in the analysis, such as the temporal or spatial scale of the activities.

As mentioned previously, NMFS estimates that the Society's proposed activities could potentially affect, by Level B harassment only, four species of marine mammals under our jurisdiction. For each species, these estimates are small numbers (less than one percent of the

affected stocks of California sea lions, Pacific harbor seals, and Northern fur seals, and less than seven percent of the stock of Steller sea lions) relative to the population size (Table 3).

Based on the analysis contained herein of the proposed activity (including the proposed mitigation and monitoring measures) and the anticipated take of marine mammals, NMFS preliminarily finds that small numbers of marine mammals will be taken relative to the population size of the affected species or stocks.

### **Unmitigable Adverse Impact Analysis and Determination**

There are no relevant subsistence uses of the affected marine mammal stocks or species implicated by this action. Therefore, NMFS has preliminarily determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

### **Endangered Species Act (ESA)**

Section 7(a)(2) of the Endangered Species Act of 1973 (ESA: 16 U.S.C. 1531 et seq.) requires that each Federal agency insure that any action it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat. To ensure ESA compliance for the issuance of IHAs, NMFS consults internally, in this case with the West Coast Region Protected Resources Division Office, whenever we propose to authorize take for endangered or threatened species.

No incidental take of ESA-listed species is proposed for authorization or expected to result from this activity. Therefore, NMFS has determined that formal consultation under section 7 of the ESA is not required for this action.

### **Proposed Authorization**



The St. George Reef Lighthouse Preservation Society (Society) is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(D)) to harass marine mammals incidental to conducting helicopter operations and maintenance and restoration activities on the St. George Reef Lighthouse Station (Station), when adhering to the following terms and conditions.

1. This Incidental Harassment Authorization (IHA) is valid from February 19, 2018 through February 18, 2019.

2. This IHA is valid only for activities associated with helicopter operations, lighthouse restoration and maintenance activities, and human presence on the Station on Northwest Seal Rock (NWSR) (41° 50'24'' N, 124° 22'06'' W) in the Northeast Pacific Ocean.

(a) The use of a small, compact, 4-person helicopter with two-bladed main and tail rotors fitted with noise-attenuating blade tip caps to transport work crews and tourists to and from NWSR;

(b) Restoration activities (*e.g.*, painting, plastering, welding, and glazing) conducted on the Station;

(c) Maintenance activities (*e.g.*, bulb replacement and automation of the light system) conducted on the Station;

(d) Emergency repair events (*e.g.*, the failure of the PATON beacon light) outside of the three-day work session; and

(e) Human presence.

3. General Conditions

(a) A copy of this IHA must be in the possession of the Society, its designees, and work crew personnel operating under the authority of this IHA.

- (b) The species authorized for taking are the California sea lion (*Zalophus californianus*), Pacific harbor seal (*Phoca vitulina richardii*), the eastern Distinct Population Segment of Steller sea lion (*Eumetopias jubatus*), and the northern fur seal (*Callorhinus ursinus*).
- (c) The taking, by Level B harassment only, is limited to the species listed in condition 3(b). See Table 1 (attached) for numbers of take authorized.
- (d) The taking by injury (Level A harassment), serious injury, or death of any of the species listed in condition 3(b) of the Authorization or any taking of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this IHA.
- (e) The Society shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, and Society staff prior to the start of all helicopter flights, restoration and maintenance work, and public tours, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.
- (f) Except in the event of an emergency repair event, the Society may not conduct activities between the dates of May 1, 2018 and October 31, 2018.
- (i) In the case of an emergency repair event (*i.e.*, failure of the PATON beacon light) between May 1, 2018 through October 31, 2018, the society shall consult with the Assistant Regional Administrator, West Coast Region, NMFS, to best determine the timing of an emergency repair trip to the Station.
- (ii) The West Coast Region NMFS marine mammal biologist shall make a decision regarding when the Society can schedule helicopter trips to the NWSR during the

emergency repair time window and will ensure that such operations will have the least practicable adverse impact to marine mammals.

(iii) The Assistant Regional Administrator, West Coast Region, NMFS shall also ensure that the Society's request for incidental take during an emergency repair event would not exceed the number of incidental take authorized in this IHA.

#### 4. Mitigation Measures

The holder of this Authorization is required to implement the following mitigation measures:

- (a) Conduct restoration and maintenance activities at the Station at a maximum of one session per month between February 19, 2018 and February 18, 2019, except between May 1, 2018 and October 31, 2018. Each restoration session shall be no more than three days in duration. Maintenance of the light beacon shall occur only in conjunction with the monthly restoration activities.
- (b) Ensure that helicopter approach patterns to the NWSR shall be such that the timing techniques are least disturbing to marine mammals. To the extent possible, the helicopter should approach NWSR when the tide is too high for marine mammals to haul out on NWSR.
- (c) Avoid rapid and direct approaches by the helicopter to the station by approaching NWSR at a relatively high altitude (*e.g.*, 800 – 1,000 ft; 244 – 305 m). Before the final approach, the helicopter shall circle lower, and approach from an area where the density of pinnipeds is the lowest. If for any safety reasons (*e.g.*, wind conditions or visibility) such helicopter approach and timing techniques cannot be achieved, the Society must abort the restoration and maintenance session for the day.

- (d) Provide instructions to the Society's members, the restoration crew, and if applicable, to tourists, on appropriate conduct when in the vicinity of hauled-out marine mammals. The Society's members, the restoration crew, and if applicable, tourists, shall avoid making unnecessary noise while on NWSR and must not view pinnipeds around the base of the Station.
- (e) Ensure that the door to the Station's lower platform shall remain closed and barricaded at all times.
- (f) The Society shall establish monitoring protocols as described below.

5. Monitoring

The holder of this Authorization is required to conduct marine mammal monitoring during helicopter operations. Monitoring and reporting shall be conducted in accordance with the Monitoring Plan. The Society is required to:

- (a) Have a NMFS-approved biologist present on the first flight of each day of activities.
- (b) Record the date, time, and location (or closest point of ingress) of each visit to the NWSR.
- (c) Collect the following information for each visit:
  - (i) Information on the numbers (by species) of marine mammals observed during the activities;
  - (ii) The estimated number of marine mammals (by species) that may have been harassed during the activities;

- (iii) Any behavioral responses or modifications of behaviors that may be attributed to the specific activities (*e.g.*, flushing into the water, becoming alert and moving, rafting); and
- (iv) Information on the weather, including the tidal state and horizontal visibility.
- (d) Employ a skilled, aerial photographer to document marine mammals hauled out on NWSR.
  - (i) The photographer will complete a photographic survey of NWSR using the same helicopter that will transport Society personnel to the island during restoration trips.
  - (ii) Photographs of all marine mammals hauled out on the island shall be taken at an altitude greater than 300 m (984 ft) during the first arrival flight to NWSR.
  - (iii) The Society and/or its designees will forward the photographs to a biologist capable of discerning marine mammal species. The Society shall provide the data to us in the form of a report with a data table, any other significant observations related to marine mammals, and a report of restoration activities (see Reporting). The Society shall make available the original photographs to NMFS or to other marine mammal experts for inspection and further analysis.

6. Reporting

The holder of this Authorization is required to:

- (a) Submit a draft report on all monitoring conducted under the IHA within ninety calendar days of the completion of lighthouse maintenance and preservation work in April. This report must contain the following information:
  - (i) A summary of the dates, times, and weather during all helicopter operations, restoration, and maintenance activities.

- (ii) Species, number, location, and behavior of any marine mammals, observed throughout all monitoring activities.
  - (iii) An estimate of the number (by species) of marine mammals that are known to have been exposed to visual and acoustic stimuli associated with the helicopter operations, restoration, and maintenance activities.
  - (iv) A description of the implementation and effectiveness of the monitoring and mitigation measures of the IHA and full documentation of methods, results, and interpretation pertaining to all monitoring.
- (b) Reporting injured or dead marine mammals:
- (i) In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by this IHA, such as an injury (Level A harassment), serious injury, or mortality, the Society shall immediately cease the specified activities and report the incident to the Office of Protected Resources (301-427-8401) and/or by email to Amy.Fowler@noaa.gov, and the Assistant West Coast Regional Stranding Coordinator (562-980-3264, Justin.Greenman@noaa.gov). The report must include the following information:
    - 1. Time and date of the incident;
    - 2. Description of the incident;
    - 3. Environmental conditions (*e.g.*, wind speed and direction, sea state, cloud cover, and visibility);
    - 4. Description of all marine mammal observations and active sound source use in the 24 hours preceding the incident;
    - 5. Species identification or description of the animal(s) involved;

6. Fate of the animal(s); and
7. Photographs or video footage of the animal(s).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS will work with the Society to determine what measures are necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. The Society may not resume their activities until notified by NMFS.

(ii) In the event that the Society discovers an injured or dead marine mammal, and the lead observer determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.*, in less than a moderate state of decomposition), the Society shall immediately report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinator, NMFS.

The report must include the same information identified in 6(b)(i) of this IHA. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with the Society to determine whether additional mitigation measures or modifications to the activities are appropriate.

(iii) In the event that the Society discovers an injured or dead marine mammal, and the lead observer determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.*, previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), the Society shall report the incident to the Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinator, NMFS, within 24 hours of the discovery. The Society shall provide photographs or video footage or other documentation of the stranded animal sighting to NMFS.

7. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

### **Request for Public Comments**

We request comment on our analyses, the proposed authorization, and any other aspect of this Notice of Proposed IHA for the proposed lighthouse restoration and maintenance project. We also request comment on the potential for renewal of this proposed IHA as described in the paragraph below. Please include with your comments any supporting data or literature citations to help inform our final decision on the request for MMPA authorization.

On a case-by-case basis, NMFS may issue a second one-year IHA without additional notice when 1) another year of identical or nearly identical activities as described in the Specified Activities section is planned or 2) the activities would not be completed by the time the IHA expires and a second IHA would allow for completion of the activities beyond that described in the Dates and Duration section, provided all of the following conditions are met:

- A request for renewal is received no later than 60 days prior to expiration of the current IHA.
- The request for renewal must include the following:
  - (1) An explanation that the activities to be conducted beyond the initial dates either are identical to the previously analyzed activities or include changes so minor (e.g., reduction in pile size) that the changes do not affect the previous analyses, take estimates, or mitigation and monitoring requirements.



- (2) A preliminary monitoring report showing the results of the required monitoring to date and an explanation showing that the monitoring results do not indicate impacts of a scale or nature not previously analyzed or authorized.
- Upon review of the request for renewal, the status of the affected species or stocks, and any other pertinent information, NMFS determines that there are no more than minor changes in the activities, the mitigation and monitoring measures remain the same and appropriate, and the original findings remain valid.

Dated: February 23, 2018.

*Donna Wieting,*

*Director,*

*Office of Protected Resources,*

*National Marine Fisheries Service.*

[FR Doc. 2018-04147 Filed: 2/28/2018 8:45 am; Publication Date: 3/1/2018]